

c1
1. (*Amended*) A semiconductor device comprising:

a first MOS transistor formed on a semiconductor layer of an SOI substrate in which the semiconductor layer is formed on a semiconductor substrate of a first conductivity type with the intervention of a buried insulating film,

a contact portion for applying to the semiconductor substrate different bias voltages in an operating state and a standby state of a semiconductor circuit including the first MOS transistor,

the first MOS transistor including source and drain regions of a second conductivity type, a channel of the first conductivity type, and wherein an impurity diffusion layer of the first conductivity type is formed in the semiconductor substrate under at least the entire source, drain and channel regions, so that the impurity diffusion layer is of the same conductivity type as the semiconductor substrate, wherein said source and drain regions as well as said channel are all formed in the semiconductor layer,

wherein the contact portion for applying the different bias voltages is formed in a device isolation region and comprises a contact hole in the semiconductor layer and the buried insulating film, said contact hole reaching the impurity diffusion layer so that the different bias voltages are applied to the substrate via the impurity diffusion layer, and wherein a conductor of the contact portion in the contact hole is electrically insulated from the semiconductor layer by at least said device isolation region which includes at least one insulator; and

c1
cont.

a second MOS transistor, wherein the first and second MOS transistors are of different conductivity types on the substrate, and wherein bias voltages applied via separate of said contact portions for both of the first and second transistors are changed between the active and standby states so that active regions of the first and second transistors are completely depleted simultaneously in the standby state.

c2

5. (*Amended*) A semiconductor device according to claim 4, wherein the well is a P-type well under an N-channel MOS transistor which is the first of said first and second MOS transistors, while a well for the other of the first and second MOS transistors is an N-type well formed in the semiconductor substrate under a P-channel MOS transistor which is the second of said first and second MOS transistors.

c3

7. (*Amended*) A semiconductor device comprising:

a first MOS transistor formed on a semiconductor layer of an SOI substrate in which the semiconductor layer is formed on a semiconductor substrate with the intervention of a buried insulating film,

an element isolating region formed in the semiconductor layer,

a contact region formed in the element isolating region for connection with a contact portion for applying a bias voltage to a well of the semiconductor substrate, the well being of the first conductivity type same as that of the other region of the semiconductor substrate directly under the well;

c³ wherein a conductor of the contact portion in the contact region is electrically insulated from said semiconductor layer; and

a second MOS transistor, wherein the first and second MOS transistors are of different conductivity types on the substrate, and wherein bias voltages applied via separate contact regions for both of the first and second transistors are changed between the active and standby states so that active regions of the first and second transistors are completely depleted simultaneously in the standby state.

8. (*Amended*) A semiconductor device according to claim 7, wherein the well is formed in a surface of the semiconductor substrate which lies under the first MOS transistor formed on the semiconductor layer, the well having an impurity concentration higher than that of the other region of the substrate, and the bias voltages are applied to the well.

9. (*Amended*) A semiconductor device according to claim 8, wherein the well is a P-type well under an N-channel MOS transistor which is the first of said first and second MOS transistors, while a well for the other of the first and second MOS transistors is an N-type well formed in the semiconductor substrate under a P-channel MOS transistor which is the second of said first and second MOS transistors.

c⁴ 11. (*Amended*) A semiconductor device according to claim 7, wherein different bias voltages are applied in an operating state and a standby state of a semiconductor

C4
comb
circuit including the at least the first MOS transistor, thereby to change a threshold
voltage of at least the first MOS transistor.

C5
24. (*Amended*) A semiconductor device comprising:
a PMOS transistor and an NMOS transistor formed on a semiconductor layer of an
SOI substrate in which the semiconductor layer is formed on a semiconductor substrate
of a first conductivity type with the intervention of a buried insulating film,
a p-type well formed in the substrate for the NMOS transistor and an n-type well
formed in the substrate for the PMOS transistor, the p-type and n-type wells being
substantially isolated from one another; and
respective contact portions for applying to the semiconductor substrate via the
wells different bias voltages in a transistor operating state and a transistor standby state so
that active regions of the different conductivity type transistors are completely depleted
simultaneously in the standby state, wherein said contact portions are electrically
insulated from said semiconductor layer.

REMARKS

This is in response to the Office Action dated February 12, 2003. Claims 1, 4-11
and 24 are pending. Attached hereto is a marked-up version of the changes made to the
claim(s) by the current amendment. The attached page(s) is captioned "**Version With
Markings To Show Changes Made.**"